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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,753	09/23/2003	James L. McArdle	58717US002	1787

32692 7590 06/14/2005

3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MN 55133-3427

EXAMINER
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MARCHESCHI, MICHAEL A

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/668,753

Applicant(s)

MCARDLE ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/24/05.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-29 and 31-34 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8, 10-29 and 31-34 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/19/05, 4/22/05, 5/12/05  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/24/05 has been entered.

Claims 23-29 and 31-32 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 is indefinite as to the phrase “**removing the slurry...** from the production tool” (step (f)) because once the binder precursor (in the slurry) is cured, as defined by step (e), **it will not longer be a slurry**, but a cured form thereof. How can step (f) define removing a slurry if the slurry is cured (i.e. it is not a slurry once it is cured)?

Claim 24 is indefinite as to the phrase “the step of curing...is done before the step of removing **the slurry...** from the production tool” (steps (e) and (f) of claim 23) because once the binder precursor (in the slurry) is cured, **it will not longer be a slurry**, but a cured form thereof. How can the claim define a step of removing a slurry if the slurry is cured (i.e. it is not a slurry once it is cured)?

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Claim 25 is indefinite as to the phrase “the step of removing...**the cured binder**...is done before the step of curing the binder precursor” (steps (e) and (f) of claim 23) because if the binder precursor has **not** be cured yet, how can a **cured** binder be removed.

The limitations of claims 24 and 25 are not clearly defined thus rendering the scope of the claims unclear.

The other claims are indefinite because they depend on indefinite claims.

Claims 1-8, 10-29 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoopman et al. (248) in view of Abrahamson for the same reasons set forth in the previous office actions which are incorporated herein by reference.

Claims 1-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoopman et al. (217) in view of Abrahamson for the same reasons set forth in the previous office actions which are incorporated herein by reference.

Applicant's arguments filed 3/24/05 have been fully considered but they are not persuasive.

Applicants argue that the references do not teach the combination of features recited in claims, namely the abrasive size and composite height. As clearly defined in the last office actions, the claimed features are encompassed by the disclosure of the references. Applicants argue that the two Hoopman et al. references do not teach the claimed invention in view of the unexpected results obtained in the examples and the **declaration** submitted on 3/24/05 (i.e. recognize the benefits of the claimed combination of abrasive size and composite height

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(topography)). The examiner acknowledges these results, however, this is not persuasive because applicants have **not** clearly established criticality for the claimed values because to establish unexpected results over a claimed range, applicants should compare a **sufficient number of tests both inside and outside (i.e. as well as the upper and lower limits) the claimed range** to show the criticality of the claimed range. **In re Hill 284 F.2d 955, 128 USPQ 197 (CCPA 1960)**. For example, the prior art of record teaches abrasive sizes of up to 1500 nm (which is still within applicants claimed range) yet the results defined in the examples and declaration only define an abrasive size of at **most** 300 microns. In view of this, how can this be used to show criticality for the claimed range when the reference range is well **above** this value and falls within the claimed **open** ended range? In addition, applicants never show a comparison of lower limit of the claimed combination of ranges (i.e. an abrasive size of 85 microns with an abrasive composite height of 500 microns). How can one establish criticality for the lower limits of ranges if **no** comparative evidence for the combination of these values is defined? At most, the examples and declaration might show unexpected results for a **limited** combination of abrasive sizes and composite heights. The examiner is unclear as to how a showing of only a selected few values provides criticality for the entire range, as claimed. Finally, any showing of criticality in the examples and declaration is **not** commensurate in scope with the **broad ranges, as claimed**.

In summary, criticality for the claimed ranges, when compared to the reference ranges, has **not** been established because **a sufficient number of tests both inside and outside (i.e. as well as the upper and lower limits) of the claimed range** has not been defined in order to

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clearly show the criticality of the claimed range. Applicants have not shown a sufficient number of range combinations to establish a basis for which criticality can be established.

**Evidence of unexpected results must be commensurate in scope with the subject matter claimed. *In re Linder* 173 USPO 356.**

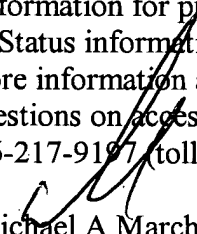
Applicants apparently are arguing that the instant invention provides benefits over the above references (i.e. grinding test results), however, since the references literally teach sizes and heights which can fall within the claimed values and applicants have **not** clearly shown evidence of unexpected results, no patentable distinction is seen to exist. This is apparent because the claimed results are expected in the articles of the references (these results are dependent on the combination of sizes and heights and since these limitations are known in the references, the grinding results are expected because the same article is expected to yield the same result).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

6/05  
MM

  
Michael A Marcheschi  
Primary Examiner  
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